ABSTRACT

An object of the invention is to significantly reduce generation of polishing flaws in a surface of a semiconductor device without affecting an advantage of fumed silica, i.e., a high polishing speed even when fumed silica is contained as a polishing agent. A wafer (3) is placed on a pad (2) stuck to a polishing bed (1), and with a pressure head (4) applying a constant weight to the wafer (3), the pad (2) and the pressure head (4) are rotated to polish the wafer (3). At the time, as a polishing composition (5) supplied onto the pad (2), there is used a polishing composition that is an aqueous dispersion solution of fumed silica and where an increase rate of an average particle diameter of fumed silica after shake test for 10 days is 10% or less. By so doing, agglomeration of the fumed silica owing to an external load and/or long storage hardly occurs and therefore, the number of polishing flaws in the polished surface of semiconductor device is significantly reduced so that a semiconductor device of high quality excellent in reliability of electrical connection can be manufactured at high yield.